

REMARKS

I. Introduction

Applicants would like to thank Examiner Patterson for the withdrawal of the previous pending rejections in view of the Applicants' response filed on March 14, 2005. For the reasons set forth below, Applicants respectfully submit that all pending claims are patentable over the cited prior art references.

II. The Rejection Of Claim 1 Under 35 U.S.C. § 103

Claim 1 was rejected under 35 U.S.C. § 103 as being obvious over USP No. 4,726,974 to Nowobilski in view of USP No. 5,866,228 to Awata. Applicants respectfully traverse this rejection for at least the following reasons.

As recited by claim 1, the vacuum heat insulator of the present invention includes a laminate bag comprising a laminate film, which includes a first support layer, a second deposition layer formed on a surface of the support layer, a third protective layer formed on a surface of the deposition layer, and a fourth seal layer. In the pending rejection, it is asserted that Nowobilski discloses the laminate film recited by claim 1. Applicants respectfully disagree for at least the following reasons. Nowobilski discloses only that an insulation panel comprises *one layer* of plastic and *one layer* of metal laminated thereon, where the plastic layer is the inside layer and the metal layer is the outside layer of the dual layered film (*see*, Nowobilski, col. 2, lines 3-5). In other words, the insulation panel of Nowobilski comprises *only two layers*. Indeed, Nowobilski continually refers to the film as the "dual layered film". In contrast, as noted above, the laminate film recited by claim 1 comprises *three layers*; that is, a support layer,

a deposition layer formed on the support layer and a protective layer formed on the deposition layer.

Nowobilski is completely silent with regard to *specifically* laminating a second plastic film on the other side of the metal layer away from the first plastic (i.e., sandwiching the metal layer with two plastics) so as to arrive at a structure of plastic/metal/plastic of the present invention.

Thus, even assuming *arguendo* that the combination of Nowobilski and Awata is proper, the combination still fails to disclose or suggest each element of claim 1. Accordingly, as each and every element of the claim must be disclosed or suggested by the prior art in order to establish a *prima facie* case of obviousness (*see*, M.P.E.P. § 2143.03), and the combination of Nowobilski and Awata fails to do so, it is respectfully submitted that the rejection of claim 1 based on Nowobilski and Awata is improper.

Finally, it is also noted that the pending rejection utilizes Awata for modifying the metal layer of Nowobilski, because Awata discloses the advantage of providing a desired gas barrier property and flexibility of the end product. However, this benefit is allegedly already achieved by the device of Nowobilski, as is made clear by the express objectives recited by Nowobilski, including “the plastic serves to provide *flexibility* to the enclosure and ... metal serves to provide an *effective vapor barrier* to the enclosure” (*see*, Nowobilski, col. 1, line 68 to page 2, line 3). Thus, there would be no motivation (or other reason) to modify Nowobilski in accordance with the teachings of Awata as suggested in the pending rejection.

For all of the foregoing reasons, it is respectfully submitted that claim 1 is patentable over Nowobilski and Awata, taken alone or in combination with one another.

III. The Rejection Of Claims 2-3, 13-15 And 65 Under 35 U.S.C. § 103

Claims 2-3, 13-15 and 65 were rejected under 35 U.S.C. § 103 as being obvious over USP No. 4,726,974 to Nowobilski in view of USP No. 5,866,228 to Awata and USP No. 6,127,509 to Pratte. Applicants respectfully traverse this rejection for at least the following reasons.

As explained in detail in one of Applicants' previous responses, the Applicants discovered that in the conventional vacuum heat insulator, due to differences in the coefficient of thermal expansion between the layers, cracks are often formed at high temperature, preventing the insulator to operate desirably. Especially when thermal stress is applied, the insulating performance of the vacuum heat insulator deteriorates, (*see, e.g.*, page 3 of specification). Furthermore, plastic material is known to expand when heated. Since the stress given to the plastic film in its manufacturing process remains therein, sometimes it contracts significantly when heated. In particular, the contraction of the plastic film is significant at a temperature exceeding 80°C. Therefore, employing the use of a plastic film having a glass transition point of 100°C or higher increases dimensional stability of the film and also prevents the occurrence of cracking on the deposition layer, thereby realizing a vacuum heat insulator having higher heat resistance and durability.

Turning to the prior art references, it is first and foremost noted that none of the cited prior art references appear to acknowledge the problem solved by the present invention regarding prevention of the cracking of the plastic film utilized in the insulator. Indeed, neither Nowobilski nor Awata even appear to suggest that the insulators disclosed therein must be capable of being utilized in a high temperature environment. Pratte merely discloses a polyimide polymer having a glass transition temperature exceeding 100°C.

Thus, absent reference to the Applicants' disclosure, there is simply no motivation to make the proposed modification of Nowobilski and Awata to include the polyimide polymer of Pratte. As noted above, neither Nowobilski nor Awata appear to require that the insulators disclosed therein be suitable for operation in a high temperature environment.

Accordingly, the only motivation for making the combination is derived from Applicants' specification. That is, it appears that the proposed combination is improperly based solely on improper hindsight reasoning, whereby selected bits and pieces of the prior art are combined using Applicants' specification as a guide to reconstruct the claimed invention.

As such, the proposed combination is improper because the pending rejection has not provided the requisite *objective* evidence *from the prior art* that "suggests the desirability" of the proposed combination. As is well known in patent law, a *prima facie* showing of obviousness can only be established if the prior art "suggests the desirability" of the proposed combination using *objective* evidence. The Examiner is directed to MPEP § 2143.01 under the subsection entitled "Fact that References Can Be Combined or Modified is Not Sufficient to Establish *Prima Facie* Obviousness", which sets forth the applicable standard:

The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. (*In re Mills*, 16 USPQ2d 1430 (Fed. Cir. 1990)).

The Examiner is further directed to MPEP § 2143.01 under the subsection entitled "Fact that the Claimed Invention is Within the Capabilities of One of Ordinary Skill in the Art is Not Sufficient by Itself to Establish *Prima Facie* Obviousness", which sets forth the applicable standard: A statement that modifications of the prior art to meet the claimed invention would have been [obvious] because the references relied upon teach that all aspects of the claimed

invention were *individually* known in the art is *not* sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references. (citing *Ex parte Levengood*, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993)).

At best, the pending rejection has attempted to show only that the elements (i.e., polycarbonate, etc.) of the claimed invention are *individually* known without providing a *prima facie* showing of obviousness that the *combination* of elements recited in the claims is known or suggested in the art. For all the foregoing reasons, it is submitted that the proposed combination of Nowobilski, Awata and Pratte is improper.

Based on all the foregoing, it is respectfully requested that the rejection of claims 2-3, 13-15 and 65 be withdrawn.

IV. Request For Notice Of Allowance

Having fully responded to all matters raised in the Office Action, Applicants submit that all claims are in condition for allowance, an indication for which is respectfully solicited.

If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicants' attorney at the telephone number shown below.

Application No.: 09/608,169

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time

Respectfully submitted,

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